CLAIMS

1. Communication system for automation equipment (10) acting on a TCP/IP network (50) in which the automation equipment (10) controls an automation application by executing an application program (20) written in one or several languages according to standard IEC 1131-3, characterised by the fact that the communication system comprises:

- exchange means for implementing a WEB server function or a WEB client function inside an application program (20), these exchange means comprising at least one WEB function block (21, 22) that can interact with the application program (20),

- an HTTP interface (15) in the automation equipment (10) capable of routing messages from the TCP/IP network (50) to a WEB function block identified by a URL address, and routing messages from a WEB function block in the automation equipment (10) to a URL address on the TCP/IP network (50).

2. Communication system according to claim 1 or 2, characterised by the fact that it comprises at least one reception WEB function block (21) to implement a WEB server function in an application program (20).

3. Communication system according to claim 1 or 2, characterised by the fact that it comprises at least one send WEB function block (22) to implement a WEB client function in an application program (20).

4. Communication system according to claim 3, characterised by the fact that a WEB function block (21, 22) comprises a generic program code and

configuration data (219, 229) that are specific to each WEB function block.

5. Communication system according to claim 4, characterised by the fact that configuration data (219, 229) of a WEB function block (21, 22) include the general format of frames exchanged by the WEB function block (21, 22), the type of HTTP request that the WEB function block (21, 22) receives or sends and the relative URL address of the WEB function block (21,22) in the automation equipment (10).

6. Communication system according to claim 4, characterised by the fact that a designer of an application program (20) is capable of configuring the configuration data (219, 229) of WEB function blocks (21, 22) integrated in an application program (20), in text form.

7. Communication system according to claim 4, characterised by the fact that the configuration data (219) of a reception WEB function block (21) contain means of making a correspondence between the elements of an HTTP request (51) and output parameters (OUT_1,OUT_n) for the reception WEB function block (21), and creating a correspondence between the input parameters (IN_1,IN_n) for the reception WEB function block (21) and the elements of an HTTP answer (52).

8. Communication system according to claim 4, characterised by the fact that the configuration data (229) of a send WEB function block (22) contain means of creating a correspondence between input parameters (IN_1, IN_n) for the send WEB function block (22) and the elements of an HTTP request (51), and creating a

correspondence between elements of an HTTP answer (52) and the output parameters (OUT_1,OUT_n) for the send WEB function block (22).

9. Communication system according to claim 4, characterised by the fact that the contents of an HTTP request (51) or an HTTP answer (52) is an XML frame.

10. Communication system according to claim 9, characterized by the fact that the configuration data (219) of a reception WEB function block (21) contain means of making a correspondence between the elements of an XML frame contained in an HTTP request (51) and output parameters (OUT_1, OUT_n) for the reception WEB function block (21), and creating a correspondence between the input parameters (IN_1, IN_n) for the reception WEB function block (21) and the elements of an XML frame contained in an HTTP answer (52).

11. Communication system according to claim 9, characterised by the fact that the configuration data (229) of a send WEB function block (22) contain means of making a correspondence between input parameters (IN_1, IN_n) for the send WEB function block (22) and elements of an XML frame contained in an HTTP request (51), and creating a correspondence between the elements of an XML frame contained in an HTTP answer (52) and the output parameters (OUT_1, OUT_n) for the send WEB function block (22).

12. Communication system according to claim 4, characterised by the fact that the content of an HTTP request (51) is a URL encoded frame.

13. Communication system according to claim 12, characterised by the fact that the configuration data

(219) of a reception WEB function block (21) contain means of creating a correspondence between the elements of an encoded URL frame contained in an HTTP request (51) and output parameters (OUT_1,OUT_n) for the reception WEB function block (21).

14. Communication system according to claim 12, characterised by the fact that the configuration data (229) of a send WEB function block (22) contain means of creating a correspondence between input parameters (IN-1,IN_n) for the send WEB function block (22) and the elements of a URL encoded frame contained in an HTTP request (51).

15. Automation equipment characterised by the fact that it contains an application program that integrates a communication system on a TCP/IP network according to one of the previous claims.

16. Programming station used to design an application program (20) of automation equipment (10) written in one or several languages conform with standard IEC1131-3, characterised by the fact that this programming station can be used to:

- display, insert, delete and modify at least one WEB function block (21,22) integrated into an application program (20),

- set parameters for configuration data (219, 229) for at least one such WEB function block (21, 22) in text form.

17. Programming station according to claim 16, characterised by the fact that it uses preconfigured WEB function block libraries that can be memorized and manipulated starting from the programming station and

include sets of WEB function blocks specialized in a type of content and/or protocol implemented using HTTP.